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IS : 1100 - 1978

Indian Standard
SPECIFICATION FOR
HANDLOOM COTTON CREPE
(*First Revision*)

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SPECIFICATION FOR HANDLOOM COTTON CREPE

(First Revision)

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Indian Standard
SPECIFICATION FOR
HANDLOOM COTTON CREPE
(*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 5 June 1978, after the draft finalized by the Handloom and Khadi Sectional Committee had been approved by the Textile Division Council.

0.2 This standard which was first published in 1957 has been revised to make it up to date. The constructional particulars of such varieties of crepe cloth, which are in vogue, have been incorporated. Other important changes carried out in the standard are:

- a) deletion of breaking strength values, and
- b) inclusion of inspection, marking and packing clauses.

0.3 The cloth covered by this standard is woven in plain weave with high twisted cotton yarn having twist multiplier around 8·25. The twist in warp and weft yarn shall be in the same direction. The cloth develops the crepe effect on processing it in caustic soda.

0.4 To familiarize the industry with International System of Units (SI Units), the basic SI Units as well as the recommended SI Units for use in the textile industry are given in Appendix B.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the constructional particulars and other requirements of three varieties of handloom cotton crepe, bleached, dyed, printed, striped or checked.

1.2 This standard does not specify the general appearance, feel, shade, finish, etc, of the cloth (*see also 3.3*).

2. MANUFACTURE

2.1 Yarn — The cotton yarn used in the manufacture of crepe shall be satisfactory in evenness and reasonably free from neps and spinning defects. The yarn shall be highly twisted having twist multiplier of around 8·25.

2.2 Cloth — The cloth shall be woven in plain weave and shall be free from dressing and filling materials and from substances liable to cause subsequent tendering.

3. REQUIREMENTS

3.1 The constructional particulars of cloth shall conform to those given in Table 1. The loomstate particulars, that is, ends and picks in the loomstate are also given in the table.

3.2 The colour fastness ratings and other requirements of the cloth shall conform to those given in Table 2.

3.3 If in order to illustrate or specify the indeterminable characteristics, such as general appearance, lustre, feel and shade of the cloth, a sample has been agreed upon and sealed, the supply shall be in conformity with the sample in such respects.

3.3.1 The custody of the sealed sample shall be a matter of prior agreement between the buyer and the seller.

4. INSPECTION

4.1 The cloth when visually inspected shall be reasonably free from the following defects:

- a) Weft crack of more than two missing picks across the width of the material;
- b) Prominently noticeable weft bar due to the difference in raw material, count, twist, lustre, colour, shade or pick spacing of adjacent groups of weft yarn;

- c) More than two adjacent ends running parallel, broken or missing and extending beyond 15 cm;
- d) Prominent selvage defects;
- e) Noticeable warp or weft float;
- f) Noticeable oil or other stains;
- g) Noticeable hole, cut or tear up to 3 mm in size;
- h) Smash rupturing the texture of the fabric; and
- j) Prominently noticeable printing or dyeing defect.

4.1.1 A reference may be made to IS : 4125-1967* for details of these defects.

5. MARKING

5.1 Each piece shall be suitably marked or labelled with the following information:

- a) Name of the material;
- b) Manufacturer's name, initials or trade mark;
- c) Length and width of the piece; and
- d) Count of warp and weft yarn.

5.1.1 The cloth may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

6. PACKING

6.1 Unless otherwise agreed upon the buyer and the seller, the cloth shall preferably be packed in bales or cases in conformity with the procedure laid down either in IS : 1347-1972† or IS : 293-1967‡.

7. SAMPLING

7.1 Lot — The quantity of handloom crape of the same width and colour delivered to a buyer against a despatch note shall constitute a lot.

*Glossary of terms pertaining to defects in fabrics.

†Specification for inland packaging of cotton cloth and yarn (first revision).

‡Specification for seaworthy packaging of cotton cloth and yarn (second revision).

TABLE 1 CONSTRUCTIONAL PARTICULARS OF HANDLOOM COTTON CREPE
(Clause 3.1)

VARI- ETY No.	COUNT OF YARN [COTTON COUNT (UNIVERSAL COUNT)]		PROCESSED CLOTH		LOOMSTATE CLOTH		LENGTH	WIDTH
	Warp	Weft	Ends/ cm	Picks/ cm	Ends/ cm	Picks/ cm		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
							m	cm
1	20s (30 tex)	20s (30 tex)	16	18	15	17	40	71, 102
2	40s (14.5 tex)	40s (14.5 tex)	24	29	23	27	or as agreed	or as agreed
3	60s (10 tex)	60s (10 tex)	34	29	32	27		
TOLER- ANCE, PER- CENT	± 5	± 5	± 5	± 5	± 5	± 5	—	± 2
METHOD OF TEST	IS : 3442-1966*	IS : 3442-1966*	IS : 1963- 1969†	IS : 1963- 1969†	IS : 1963- 1969†	IS : 1963- 1969†	IS : 1954- 1969‡	IS : 1954- 1969‡

NOTE — In case of crepe fabrics woven in rib, check or stripes, the number of ends and picks may vary due to the use of coarse yarn alongwith high twisted yarn.

*Method for determination of crimp and count of yarn removed from fabrics,

†Methods for determination of threads per decimetre in woven fabrics (first revision).

‡Methods for determination of length and width of fabrics (first revision).

TABLE 2 REQUIREMENTS OF HANDLOOM COTTON CREPE

(Clause 3.2)

SL No.	CHARACTERISTIC	REQUIREMENT	METHOD OF TEST, REF TO
(1)	(2)	(3)	(4)
i)	Colour fastness to:		
	a) Light	5 or better	IS : 686-1957* or IS : 2454-1967†
	b) Washing: Test 3	4 or better	IS : 764-1966‡
ii)	Dimensional change, percent, <i>Max</i>	4.0	IS : 2977-1969§
iii)	Scouring loss, percent, <i>Max</i>	2.5	IS : 1383-1977
iv)	pH value of aqueous extract	6.0 to 8.5	Appendix A
*Method for determination of colour fastness of textile materials to daylight.			
†Method for determination of colour fastness of textile materials to artificial light (xenon lamp).			
‡Method for determination of colour fastness of textile materials to washing: Test 3 (revised).			
§Method for determination of dimensional changes of woven fabrics (other than wool) on soaking in water.			
Method for determination of scouring loss in grey and finished cotton textile materials (first revision).			

7.2 To ascertain the conformity of the lot to the requirements of this standard, samples shall be drawn and inspected from each lot separately.

7.3 The number of pieces to be selected at random for inspection shall be in accordance with Table 3.

TABLE 3 SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING PIECES

LOT SIZE	SAMPLE SIZE	PERMISSIBLE NUMBER OF NON-CONFORMING PIECES	SUB-SAMPLE SIZE
(1)	(2)	(3)	(4)
Up to 25	3	0	2
26 „ 50	5	0	2
51 „ 150	8	0	3
151 „ 300	13	1	3
301 „ 500	20	1	5
501 and above	32	2	8

7.4 Number of Tests and Criteria for Conformity

<i>Characteristics</i>	<i>Number of Tests</i>	<i>Criteria for Conformity</i>
Visual inspection, ends, picks, length and width	According to col 2 of Table 3	Number of non-conforming pieces not to exceed corresponding number given in col 3 of Table 3
Count of yarn, colour fastness to washing, dimensional change, scouring loss and pH value	According to col 4 of Table 3	All the test specimens to meet the corresponding requirements
Colour fastness to light	2 for lot size of 300 or less and 3 otherwise	do

A P P E N D I X A

(Table 2)

METHOD FOR DETERMINATION OF pH VALUE OF AQUEOUS EXTRACT

A-1. APPARATUS

A-1.1 Erlenmeyer Flask

A-1.2 Reflux Condenser

A-2. REAGENTS

A-2.1 Distilled Water — See IS : 1070-1977*.

A-2.2 Indicator pH Papers

*Specification for water for general laboratory use (*second revision*).

A-3. PROCEDURE

A-3.1 Draw from each piece in the test sample at least two test specimens and cut it into small bits. Put the bits in the Erlenmeyer flask and add to this 50 ml of distilled water. Boil the contents for one hour under the reflux condenser. Stopper the flask and cool the contents. Decant the supernatant extract in a test tube.

A-3.2 Take the pH indicator paper. Dip it in the extract and compare the colour of the moistened indicator paper with those printed on the booklet or dispenser containing the indicator paper. Designate the number written on a particular colour shade with which the moistened indicator paper matches as pH of the extract.

A-3.3 Similarly, test the remaining test specimen(s).

A-4. REPORT

A-4.1 Report the pH value of the extract as determined above.

APPENDIX B

(Clause 0.4)

SI UNITS**TABLE 4 INTERNATIONAL SYSTEM OF UNITS****Base Units**

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	CONVERSION
Force	newton	N	1 N = 0.101 972 kgf
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Pressure, stress	pascal	Pa	1 Pa = N/m ²

TABLE 5 RECOMMENDED SI UNITS FOR TEXTILES

Sl No.	CHARACTERISTIC	SI UNITS		APPLICATION
(1)	(2)	Unit (3)	Abbreviation (4)	(5)
1. Length	Millimetre Millimetre, centimetre Metre	mm mm, cm m	Fibre Samples and test specimens (as appropriate) Yarns, ropes and cordages, fabrics	
2. Width	Millimetre Centimetre Millimetre, centimetre Centimetre, metre	mm cm mm, cm cm, m	Narrow fabrics Other fabrics Samples and test specimen (as appropriate) Carpets, druggets, <i>DURRIES</i> (as appropriate)	
3. Thickness	Micrometre (micron) Millimetre	μm mm	Delicate fabrics Other fabrics, carpets, felts	
4. Linear density	Tex Millitex Decitex Kilotex	tex mtex dtex ktex	Yarns Fibres Filament and filament yarns Slivers, ropes and cordages	
5. Diameter	Micrometre (micron) Millimetre	μm mm	Fibres Yarns, ropes, cordages	
6. Circumference	Millimetre	mm	Ropes, cordages	
7. Threads in cloth:			Woven fabrics (as appropriate)	
a) Length	Number per centimetre Number per decimetre	ends/cm ends/dm		
b) Width	Number per centimetre Number per decimetre	picks/cm picks/dm		
8. Warp threads in loom	Number per centimetre	ends/cm	Reeds	
9. Stitches in knitted cloth:			Knitted fabrics (as appropriate)	
a) Length	Courses per centimetre Courses per decimetre	courses/cm courses/dm		
b) Width	Wales per centimetre Wales per decimetre	wales/cm wales/dm		

(Continued)

TABLE 5 RECOMMENDED SI UNITS FOR TEXTILES — *Contd*

SL No.	CHARACTERISTIC	SI UNITS		APPLICATION
		Unit	Abbreviation	
(1)	(2)	(3)	(4)	(5)
10.	Stitch length	Millimetre	mm	Knitted fabrics Made-up fabrics
11.	Mass per unit area	Grams per square metre	g/m ²	Fabrics
12.	Mass per unit length	Grams per metre	g/m	Fabrics
13.	Twist	Turns per centimetre	turns/cm	Yarns, ropes (as appropriate)
		Turns per metre	turns/m	
14.	Test or gauge length	Millimetre, centimetre	mm, cm	Fibres, yarns and fabric specimens (as appropriate)
15.	Breaking load	Millinewton	mN	Fibres, delicate yarns (skeins or individual)
		Newton	N	Strong yarns (individual or skeins), ropes and cordages, fabrics
16.	Breaking length	Kilometre	km	Yarns
17.	Tenacity	Millinewton per tex	mN/tex	Fibres, yarns (individual or skeins)
18.	Twist factor or twist multiplier	Turns per centimetre \times square root of tex	turns/cm $\times \sqrt{\text{tex}}$	Yarns (as appropriate)
		Turns per metre \times square root of tex	turns/m $\times \sqrt{\text{tex}}$	
19.	Bursting strength	Newton per square centimetre	N/cm ²	Fabrics
20.	Tear strength	Millinewton	mN	Fabrics (as appropriate)
		Newton	N	
21.	Pile height	Millimetre	mm	Carpets
22.	Pile density	Mass of pile yarn in grams per square metre per millimetre pile height	g/m ² /mm pile height	Pile carpet
23.	Elastic modulus	Millinewton per tex per unit deformation	mN/tex/unit deformation	Fibres, yarns, strands

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